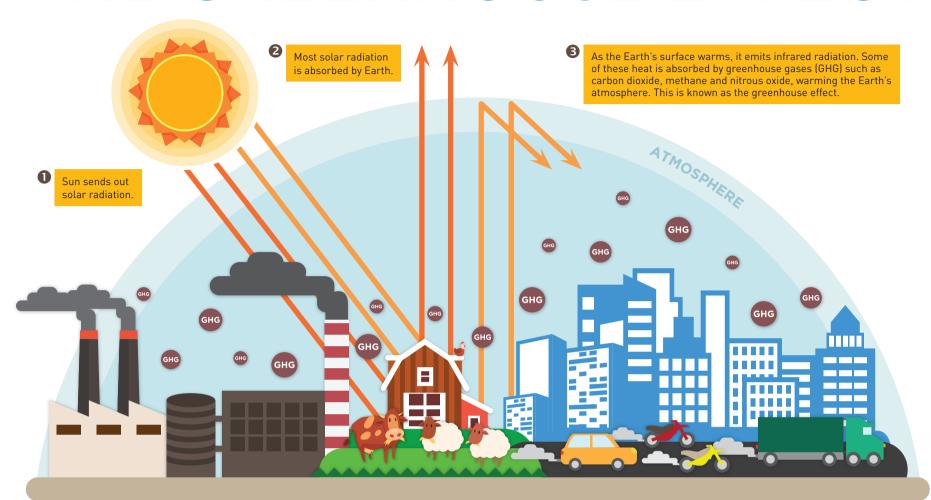
CLIMATE CHANGE AND THE GREENHOUSE EFFECT



OUR ACTIVITIES ARE RELEASING HUGE AMOUNTS OF CARBON DIOXIDE.

Fossil fuels such as coal, oil and natural gas are our main sources of energy. As these fuels are burnt to produce electricity, they release large amounts of carbon dioxide. Ever since the start of the Industrial Revolution in the late 18th century, the increase in human industrial activities has led to the burning of more fossil fuels, and in turn more carbon dioxide has been released into the atmosphere. With urbanisation and population growth, more forests are also felled to

make way for factories and homes. This also means that there are fewer plants to remove carbon dioxide

CARBON DIOXIDE ABSORBS HEAT.

Greenhouse gases absorb the sun's energy and trap it in the atmosphere. Carbon dioxide is one such greenhouse gas. With more carbon dioxide in the atmosphere, more heat is absorbed and trapped, hence warming the earth

CARBON DIOXIDE LEVELS ARE RISING.

It is estimated that the amount of carbon dioxide in the atmosphere has increased from 280 parts per million to 400 parts per million in the last 150 years. The average global temperature has increased by 0.8 °C over the same period.

As temperatures increase, ice caps are melting, causing sea levels around the world to rise. Weather patterns are also changing. We are seeing more extreme weather events such as prolonged droughts and severe snowstorms happening across various parts of the world.

Eco-activist Nor Lastrina Singapore's green community and recently represented the world's youth at the 2015 United Nations Climate Change **Conference in Paris. She** shares with us her thoughts on action for climate change.

Can you share with us one thing you have done for climate change which you feel is impactful?

Since my university days, I've made world's largest carbon sinks, but we are losing them at such an alarming rate. annual wood harvested is processed for paper and paperboards. I choose to help reduce emissions and save trees by saying "no" to printing unnecessarily.

To people who say that it seems easier not to think about climate change or take action, what would you say to them?

I agree that it is an overwhelming topic but climate change affects all our lives from our water resources and public

health to food security. We don't have lives will be worse in the future. Global temperatures have been rising and April 2016 was the hottest month in Singapore

Why do individual actions matter? Individual actions = Collective power. Individual actions add up and contribute to reducing carbon emissions. There are more than 7 billion people in the world. environment. Each time we take action our circle of friends and family to reduce carbon emissions.

I know of a youth who started a Facebook group "Journey to Zero Waste of waste. Individual actions like this can inspire more people!

Give us a few tips on what individuals can do.

Conserve energy whenever you can. The bulk of Singapore's greenhouse gas emissions comes from burning fossil Cattle contribute a large chunk of our greenhouse gas emissions. In school, join or start a green club. Think about how you and your school can be part of environmental groups, get to know the community and encourage more people to take climate action. And, if you feel strongly about an environmental issue, be courageous and email your Member of Parliament about it!

IS TAKING ACTION FOR **CLIMATE CHANGE MY SOLE RESPONSIBILITY?**

Addressing the climate challenge requires a concerted effort by everybody, but that is easier said than done, and may require each of us to step out of our comfort zone. Do the following statements resonate with how you feel about the issue at times?



There are 7 billion people in this world. I don't think I alone can make a difference!

If everyone thinks this way, nothing will change. But if all of us play our part, our concerted effort will help to slow down climate change.





Hmm... I feel that governments and other international organisations such as the United Nations should take charge of this issue instead

But those policies and measures won't work if the citizens don't support or participate in them. Hence, we need to all work together to address climate change!





That still doesn't convince me that I should lead a low-carbon lifestyle. It would mean, among others, having to give up the comfort of my air-conditioning

Think of it this way. If we make minor adjustments to lead a low-carbon lifestyle and step up our efforts over time, we would all be able to live in a sustainable and comfortable environment in the long run. In your case, you could set your thermostat to 25°C for a start, and slowly work towards using fans, instead of air-cons.



That doesn't sound like a big sacrifice. Ok, I will give it a try.

That's great! There are other simple actions that we can practise to reduce our carbon footprint too, such as switching off electrical appliances when they are not in use and taking the public transport instead of driving your own car.

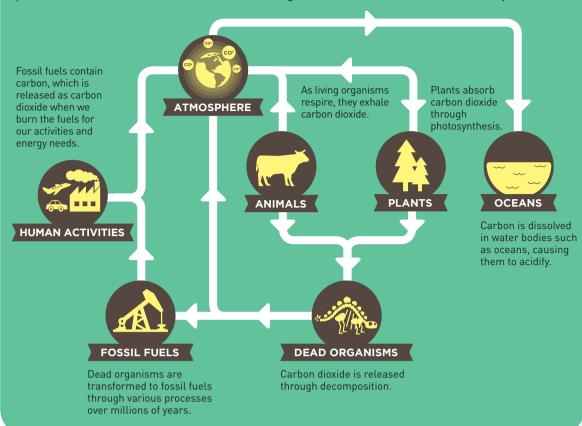


Your carbon footprint is the amount of carbon dioxide produced through the activities you do.

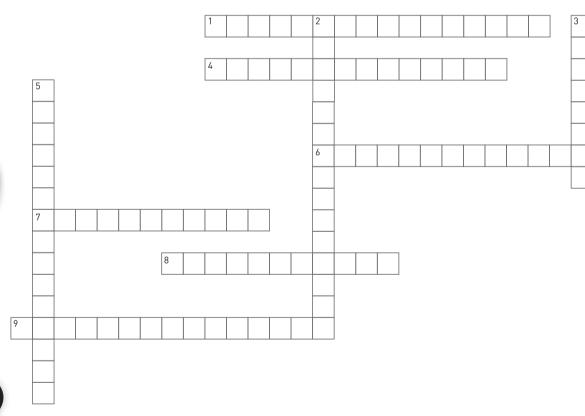
Every action counts! Find out what you can do to help slow down climate change at www.nccs.gov.sg Prought to you by National Climate Change Secretariat

THE CARBON CYCLE

Do you know that carbon is one of the most abundant elements on earth? It is found in different forms in various reservoirs such as the atmosphere, oceans, plants and even rocks and soil. Through different processes, carbon moves between the reservoirs. Together, these elements form the carbon cycle.



ACTIVITY | CROSSWORD PUZZLE



- . Greenhouse gases trap heat in the atmosphere. This is known as
- 4. As a result of climate change, the world is experiencing more events such as droughts, floods, hurricanes, heatwaves and snowstorms.
- __refers to changes in weather patterns over a long period
- 7. We burn them to meet our energy needs.
- 8. What is rising globally as a result of too much greenhouse gases
- 9. Activities such as electricity generation, deforestation, farming, factory operations and transportation release into

- 2. We are 95% sure that _____ are the main cause of climate change.
- 3. As _____rises, coastal cities face a greater risk of coastal erosion and inundation.
- ___ is the amount of carbon dioxide that is released from the energy you use and activities performed. It also shows the impact you have on the environment

. Greenhouse effect 2. Human activities 3. Sea level 4. Extreme weather 5. Carbon footprint 6. Climate change 7. Fossil fuels 8. Temperature 9. Greenhouse gases